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OBJECTIVE: All chemotherapy regimens are associated with some degree of adverse events. The more severe adverse events require hospitalization and may be associated with high costs. One adverse event that may be serious is infection and in particular infection because of neutropenia. The objective of this study was to retrospectively assess the hospitalization costs of infections and neutropenia in cancer patients. **METHODS:** Individual patient data on costs, diagnoses, and length of stay were collected from the largest cost per patient inpatient database in Sweden. The time period was January 1999 to January 2000. The hospitals included in the database all have a detailed resource tracking and cost assignment system for determining the individual cost per stay. All non-surgical patients who had the combination of a cancer ICD-10 (C000 to C997) and an infection diagnosis recorded in the database were selected. Patients who also had a neutropenia (D709) diagnosis recorded were selected and studied as a subsample of the whole sample. **RESULTS:** There were 2378 patients who had a cancer and an infection diagnosis. Their mean cost was (SEK) 69,700 and the mean length of stay was 12.3 days. The average age was 62 years and there were 59% women. Patients with a principal cancer diagnosis had greater costs than patients with a secondary cancer diagnosis, 85,500 versus 50,600. Out of the 2378 patients there were 52 who had both neutropenia and an infection. Their mean age was 55 years. There were slightly more women than men, 54%. The mean cost was (SEK) 77,900 and the mean length of stay was 12.9 days. **CONCLUSIONS:** The hospitalization costs of infections and neutropenia in cancer patients are significant. When assessing the costs of chemotherapy treatments, not only pharmaceutical costs, but also costs of adverse events should be included.

PCN7

THE LIFETIME COST OF GEFITINIB ("IRESSA") IN TREATING PATIENTS WITH NON-SMALL-CELL LUNG CANCER (NSCLC)

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OBJECTIVES: The objective of this study was to determine the lifetime cost of treating NSCLC patients with gefitinib. NSCLC is a fatal malignancy that responds poorly to chemotherapy. Best Supportive Care (BSC) is frequently offered when management with anticancer treatments is not feasible. Gefitinib ("Iressa") is the first epidermal growth factor receptor tyrosine kinase inhibitor approved for the treatment of patients with locally advanced or metastatic NSCLC. **METHODS:** Duration of gefitinib treatment was estimated by the time to progression in IDEAL 2, a phase II clinical trial involving patients with advanced or metastatic NSCLC who had previously received platinum-based chemotherapy. Post progression, patients were assumed to receive BSC. Resource utilization was estimated from the clinical trial. The cost of BSC following chemotherapy was provided by CancerCare Manitoba. Costs were expressed in Canadian dollars (2003). **RESULTS:** Patients (n = 102) received gefitinib 250 mg daily. Over 40% of patients achieved a complete response, partial response or stable disease, and clinically significant improvement in disease-related symptoms occurred in most of these patients. Median time to progression was 1.9 months. The median survival time was 7 months. The tolerability profile of gefitinib was mild and there was a low incidence of grade 3/4 adverse reactions. The lifetime cost of treating a patient with gefitinib plus BSC was estimated at $14,496. In sensitivity analyses, that lifetime cost ranged from $13,822 up to $24,915. CONLCUSIONS: The lifetime cost to treat a patient with gefitinib plus BSC was $14,496, which is comparable to costs for other chemotherapies for NSCLC. For example, the lifetime cost of second-line docetaxel was $17,739 (1999 dollars [$19,389 in 2003 dollars]) and for other chemotherapies, lifetime costs ranged from $24,828 up to $41,178 (1995 dollars [$29,059 to $48,196 in 2003 dollars]). "Iressa" is a trademark of the AstraZeneca group of companies.

PCN8

COST-EFFECTIVENESS ANALYSIS OF ORAL IBANDRONATE VERSUS IV ZOLEDRONIC ACID OR IV GENERIC PAMIDRONATE FOR BONE METASTASES FROM BREAST CANCER IN PATIENTS RECEIVING ORAL HORMONAL THERAPY IN THE UK

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OBJECTIVES: Oral ibandronate (ibandronic acid) is a bisphosphonate approved in the UK for treatment of bone metastases from breast cancer. Administration of oral ibandronate once-daily can be easily combined with oral hormonal therapy, saving costs of iv bisphosphonate administration and monitoring. We used cost-effectiveness (C/E) modelling to compare oral ibandronate with iv zoledronic acid or iv generic pamidronate in this setting. **METHODS:** The model assumed a UK NHS perspective with a duration of 14.3 months (expected average survival). Patients were assumed to receive oral hormonal therapy for 53% of their survival. Primary outcomes were direct Health Care costs and QALYs. Resource use data for iv bisphosphonates came from a published micro-costing study (validated through review by a UK clinician); costs were calculated using a unit cost database. Monthly drug acquisition costs were £195 for oral ibandronate and iv zoledronic acid, and £165 for iv generic pamidronate. The cost of managing skeletal-related events (SREs) came from a published study. Renal adverse events with monitoring and treatment costs were assumed for zoledonic acid. Efficacy was calculated as the relative risk reduction (RR) of SREs; utility scores were applied to time with/without an SRE (SRE duration assumed 1 month). **RESULTS:** The projected total cost was £297 less/patient with oral ibandronate than with zoledronic acid, and £1087 less than with generic pamidronate. Oral ibandronate led to a gain of 0.02 QALYs (due to SRE RR and bone pain relief), making it the economically dominant treatment option. For completeness, C/E results for iv ibandronate will also be presented, demonstrating C/E. **CONCLUSIONS:** This study demonstrated the use of C/E modelling to compare oral versus iv bisphosphonates using published data validated by expert clinician review. Oral ibandronate was found to be cost-effective for the management of bone metastases from breast cancer in patients receiving oral hormonal therapy.

PCN9

A TIME-IN-MOTION STUDY OF ORAL IBANDRONATE VERSUS IV ZOLEDRONIC ACID FOR THE TREATMENT OF METASTATIC BONE DISEASE IN BREAST CANCER PATIENTS IN THE UK

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OBJECTIVES: Oral bisphosphonates should reduce medical resource use versus iv infusions. A US study used time-in-motion methods to assess resource use for iv zoledronic acid vs. iv pamidronate (DesHarnais CL et al, Support Care Cancer 2001).